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ABSTRACT

Because of the rising interest in the relevance of psychology to missions, a number of empirical studies have been completed which address various issues pertaining to missionary selection, stress, and ongoing functioning. This paper presents a critique and synthesis of the empirical literature relevant to missionary selection, stress, and functioning. The research under review here was limited and was mostly preliminary or descriptive in nature. However, several conclusions can be made at both a clinical level and a practical level. In terms of missionary selection, successful candidates have been found to demonstrate good interpersonal skills, flexibility/adaptability, and a history of emotional stability. Missionaries have also been found to suffer from the effects of stress, but are often hesitant to disclose their feelings of stress and burnout. Missionary stress appears to originate from two sources: interpersonal and job factors. Lastly, missionaries have been found to be no more pathological in their functioning than the normal population. However, results concerning the influence of depression on a missionary's ability to persevere on the field remain inconclusive. It is argued that research pertaining to missionaries must move from its current disjointed approach to one that incorporates collaboration and coordination of efforts. (RJM)

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MISSIONARY SELECTION, STRESS, AND FUNCTIONING: A REVIEW OF THE LITERATURE

A Doctoral Research Paper
Presented to
the Faculty of the Rosemead School of Psychology
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In Partial Fulfillment
of the Requirements for the Degree
Doctor of Psychology

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by
Heidi Marie Vander Pol
May, 1994

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ABSTRACT

MISSIONARY SELECTION, STRESS, AND FUNCTIONING:
A REVIEW OF THE LITERATURE

by

Heidi Marie Vander Pol

A critique and synthesis of the empirical literature relevant to missionary selection, stress, and functioning is presented. This research is limited and often preliminary or descriptive in nature. However, several conclusions can be made at both a clinical level and a practical level. First, in terms of missionary selection, successful candidates have been found to demonstrate good interpersonal skills, flexibility/adaptability, and a history of emotional stability. Second, missionaries have been found to suffer from the effects of stress, but are often hesitant to disclose their feelings of stress and burnout. Missionary stress appears to originate from two sources - interpersonal and job factors. Third, missionaries have been found to be no more pathological in their functioning than the normal population. However, results concerning the influence of depression on a missionary's ability to persevere on the field remain inconclusive.

TABLE OF CONTENTS

PAGE

DOCTORAL RESEARCH PAPER

Introduction 1

Missionary Selection 3

Discussion 18

Missionary Stress 19

Discussion 34

Missionary Functioning 36

Discussion 45

Summary and Conclusion 47

REFERENCES 51

MISSIONARY SELECTION, STRESS, AND FUNCTIONING: A REVIEW OF THE LITERATURE

Introduction

Christian psychologists and theologians have created numerous forums within which to discuss the theoretical and practical applications of the truths found in both disciplines. In this effort to integrate psychology and theology, the question of how missions and mental health can interface has become a valued aspect of the movement toward practical integration.

Kelly O'Donnell (1992) notes that we live in an era where there is an unprecedented opportunity for world evangelization as the missionary force continues to grow and expand. In 1980, there were 35,000 North American Protestant overseas missionary personnel with an estimated 3,500 new missionaries beginning overseas assignments each year (Lindquist, 1982). In addition, it has been hypothesized that the number of missionaries from the Two-Thirds World may surpass the number of Westerners in the next few years (O'Donnell & O'Donnell, 1992). With this increase in missionary personnel and an awareness of the emotional struggles inherent in cross-cultural transitions and living, mission agencies are increasingly more willing to consult with mental health professionals (Hunter & Mayers, 1987).

Because of the rising interest in the relevance of psychology to missions, a number of empirical studies have been completed which address various issues pertaining to missionary selection, stress, and ongoing functioning. However, due to the relative infancy of psychological research on missions, there is currently a limited amount of empirical research pertaining to these issues. In addition, the literature on missionaries has been characterized as reflecting a "potpourri" of topics and issues. It seems that

researchers interested in the area of missions and mental health have tended to work alone and have yet to develop a formal, coordinated research effort and direction of study. (Hunter & Mayers, 1987).

Despite the lack of concerted collaboration within the research community, it appears that researchers have generally developed their studies in response to a general problem facing mission agencies and their personnel. Lindquist (1982) notes that up to 50% of first term missionaries return early or do not return to the field after their first term. This significant rate of attrition from the field has a detrimental effect on both the sending agency and their personnel. The cost to the mission board for early returnees is two-and-a-half times the cost of the individual's base salary. In addition to financial costs, the missionaries who return home early also seemingly pay an emotional price. These individuals often struggle with feelings of guilt, a sense of lowered self-esteem, and in some cases a stress-related deterioration of physical health (Williams, 1983). Thus, researchers have focused on the process of missionary selection, the effects of stress, and missionaries' psychological functioning with the general intention of elucidating the reasons why missionaries fail to persevere on the field.

This paper will present and synthesize the empirical research involving three aspects of the missionary endeavor: selection, stress, and ongoing psychological functioning. First, in terms of missionary selection, researchers have conducted studies designed to establish and statistically verify criteria to predict a candidate's success on the mission field in order to better facilitate the selection process and to better insure the candidate's perseverance on the field. Second, in regards to missionary stress, researchers have designed studies to empirically test the degree and kind of stress that missionaries encounter on the field so that preventative measures can be taken to assist missionaries in developing coping skills in their transitions to the mission field. Third, in terms of missionary functioning, researchers have conducted studies that explored the general

psychological functioning of missionaries in order to ascertain the degree of pathology and the general style of ongoing functioning of the missionary.

Missionary Selection

Kennedy and Dreger (1974) designed a study in which their global purpose was to develop an assessment tool to measure overseas missionary service and to establish criteria for effective missionary service. However, their effort to establish criteria for effectiveness was problematic in that they did not obtain statistically successful results and thus, in this article, they focused more specifically on the development of the Missionary in Action Check List (MINA). The MINA was designed to measure behavioral attributes specifically relating to personal-social-work relationships of missionaries. The MINA check list consists of 155 descriptive items (as opposed to one-word adjectives) rated on a 5-point scale. The items for the check list were derived from suggestions pertaining to qualities of missionary effectiveness made by consultants in the missionary field. These initial items were then supplemented with items representing the effectiveness of an individual in interpersonal situations. This total pool of items was then evaluated and revised by experts involved in the missionary endeavor.

The subjects were 137 individuals who were either missionaries in the Philippines, missionaries on furlough, missionaries who had completed their missionary term, missionaries who had withdrawn from service, or missionaries who were on a leave of absence. The authors' major intent in the selection of missionaries was to be able to collect data from missionaries actively engaged and working in a foreign culture. Thus, these missionaries were not necessarily selected on the basis of their effectiveness. The sample represented missionaries from five different denominations which increases the ability to generalize the results to a broader range of individuals. The researchers noted that the subject pool was comprised of both men and women, but did not detail the exact

ratio. However, the majority of female subjects in this study were wives of male missionaries.

In addition to the 137 missionaries, the sample included 430 individuals who were peers of the missionaries. It is not clear as to whether the peer respondents were fellow missionaries and/or Filipino nationals. The 137 subjects rated themselves on the MINA check list which was designed to measure the quality of their personal, social, and work relationships. In addition, the missionaries rated themselves on the Fundamental Interpersonal Relations Orientation - Behavior (FIRO-B) test, a standardized measure of interpersonal relationships for which the authors did not provide reliability coefficients. The peer respondents (N = 430) completed the FIRO-B and the MINA check list by rating the missionaries with whom they had worked closely. In addition, several mission administrators completed the MINA and the FIRO-B by rating their conception of the ideal, effective missionary in order to create an ideal profile for purposes of comparison.

The MINA scores for the 567 respondents (missionaries and their peers) were intercorrelated and the resulting matrix was factor analyzed. Eleven factors emerged as significant from the analysis. Reliability coefficients for the MINA check list were computed for the total test and each of the 11 factors. The results reflected a high level of reliability with a coefficient of .98 for the total test and a range of .73 - .93 for the factors. The authors report high reliability coefficients but do not indicate the kind of reliability for which these coefficients represent (i.e., test-retest versus split-half).

The eleven factors that emerged from the check list as significant (factor loadings greater than .35) are representative of attributes generally considered to be important in missionaries' social and professional relationships. These factors are: (a)understanding and accepting of people and ideas; (b) sensitivity to events around him/her, has close friends, has personal skills for coping with social and professional activities; (c) organizes time and energy; (d) open and accepting of change; (e) articulates his/her philosophy of

life and the way in which this philosophy impacts his/her personal and professional activities; (f) concerned with leadership abilities; (g) committed to Christ and able to share his/her faith; (h) humble and dedicated; (i) adjusts to cultural demands and can relate to people of a different culture; (j) concerned about people with special needs, such as the poor, the blind, and the physically handicapped; (k) and effectively manages family and home relationships.

The results of this comparison between self, peer, and ideal ratings on the MINA and the FIRO-B suggest that the strongest relationship existed between the self and peer ratings on the MINA check list (median of .40 and mean of .28). These results indicate that the check list measured some similar concepts for both the missionaries and their peer respondents. In comparison to the reliability of the ratings on the MINA, the ratings between self and peer on the FIRO-B were much lower (median of .10 and mean of .07). The reliability coefficients for self and ideal ratings were poor for the MINA (median of .16 and mean of .15) and not much better for the FIRO-B (median of .21 and mean of .27).

These results indicate high degrees of reliability for the total test (.98) and each of the 11 factors (.93 - .73) based on the intercorrelation of test items. However, the interrater reliability coefficients for the MINA are low and suggest that further revisions of the check list are needed. In comparison to the FIRO-B, the MINA had stronger interrater reliability and suggests that the MINA check list may be more relevant for measuring interpersonal skills pertaining to the missionary than the FIRO-B. However, further cross-validation of these tentative findings must be completed before the MINA can be used in place of a well standardized test such as the FIRO-B. In addition, further study concerning the degree to which the MINA can predict missionary effectiveness is needed by using a design that controls for effectiveness by using a sample of "effective missionaries" and that demonstrates a better correlation with the criterion (success).

Furthermore, this study did not describe the various job assignments held by the primary subjects. Thus, further study of the MINA may demonstrate that the check list may be better designed to predict success based on the particular job that the missionary will be assigned. In summary, the construction of the MINA emphasizes the quality of missionaries' interpersonal skills which will be found through other research to be an important aspect in the prediction of a missionary's effectiveness.

Ferguson, Kliewer, Lindquist, Williams, and Heinrich (1983) completed a survey in an attempt to gather descriptive information concerning the status of standard selection procedures and criteria in mission sending agencies. The survey included questions pertaining to: (a) the agencies' selection process in terms of which person within the agency performed the candidate interviews and the procedures he/she used; (b) the selection experience of the agencies in regards to the number of applications that had been received, the number of applications accepted, and reasons why individuals were not accepted for employment or discontinued in their employment; (c) the selection factors which involved ranking factors such as training experience, personal resources, validation, and background/status in terms of their importance to the selection decision. This study targeted the 78 member organizations of the Evangelical Foreign Missionary Association which represents a broad base of evangelical mission sending agencies. The survey requested information in five-year increments, beginning with 1960 and ending with 1980. Thirty-nine agencies responded to this questionnaire.

First, in terms of the selection process, the results indicated that mission agencies interviewed applicants for an average of 20 hours. The individuals involved in this interview process typically included mission agency staff, mission board members, other missionaries, and other professionals as warranted (i.e., psychologists, psychiatrist, physician, etc.). In addition to the interviews, most mission agencies used preliminary

questionnaires, formal application forms, and letters of reference as the three primary assessment sources. In addition, several agencies included psychological tests and pre-field simulated stress situations similar to missionary internship.

In terms of the mission agencies' experience with selecting missionaries, each agency received an average of 70 written applications for long term service during each five year period from 1960 to 1980. Of these 70 applicants, an average of 51 individuals were accepted and 48 of these people were actually sent to the mission field. It was noted that the total ratio of accepted to rejected applications took a significant drop during the last five year period (1975-80) with fewer applicants being accepted overall. The authors interpreted this trend in the data to mean that mission agencies may have been becoming more selective and are using better selection procedures.

In regard to the agencies' experience with missionaries who have discontinued their service, the data indicated that for each agency an average of 32 individuals discontinued their work on the field during each five year period. When compared to the number of candidates sent to the field during each five year increment (an average of 48), this is a striking number of missionaries who discontinue their service. This is especially notable when only 4.5 of these 32 terminations are due to retirement. The authors note that many reasons besides retirement were given by the mission agencies as reasons for discontinuation, however, only four of the given reasons were explored in this study. During each five year period, it was found that out of the average of 32 people that discontinued their service an average of 4 terminations were due to physical health, an average of 2 were due to emotional adjustment, an average of 2 were due to marital adjustment, and an average of 4.5 were due to retirement. The authors interpret that the number of terminations due to emotional factors may be larger in actuality, however, the mission agencies may have felt a need to protect the missionary.

In order to ascertain which candidate factors these agencies have deemed important in their selection process, the survey also included questions pertaining to educational training, school transcripts, letters of reference, personal skills and qualities, experience in church work, family background, and marital factors. For each of the items, the agency personnel were asked to rate importance of that item using a Likert scale from 1 to 7. The ten factors or criteria rated most important in the selection procedure were in rank order: (a) depth of Christian commitment, (b) knowledge of the Bible, (c) past performance in church work, (d) overall emotional stability, (e) ability to relate to persons in other cultures, (f) flexibility/adaptability, (g) motivation for choice of foreign missions activity, (h) general education level, (i) marriage status (divorced/remarried), and (j) letters of reference. In terms of general training experience prior to application, knowledge of the Bible was rated the most important with training in psychology rated as the least important. In terms of those personal skills and qualities considered important in the selection process, mission agencies ranked "depth of Christian commitment" as the most important criteria for selection. However, it remains unclear as to how selection committees might assess such an abstract concept and is an area that could be further researched.

Most of the studies completed on missionary selection have addressed the issue of which factors involving a candidate seem to best predict his/her effectiveness. Although Ferguson's et al. (1983) data is descriptive in nature, the data concerning standard selection criteria is extremely valuable at a practical level in terms of providing a frame to guide selection committees in their selection decisions. It was noted in this study that while most responding mission personnel seemed relatively satisfied with their screening and selection procedures, the majority of the agencies were open to improving their ability to select successful missionaries in addition to developing a psychological screening program to facilitate this endeavor. This study provides an understanding for

what has been standard procedure in the selection processes of potentially effective missionary personnel and serves as a foundational source of information from which further research on selection procedures and selection criteria can be performed.

Cureton (1983) designed a study in order to establish criteria concerning missionary success in three areas - skills competence, personality characteristics, and interpersonal skills. An integrational component of this study is that Cureton used both mental health professionals' and missionary leaders' opinions of what qualities constitute a hypothetically successful missionary in these three areas. Thus, another goal of his study was to ascertain the degree of agreement concerning successful missionary performance between these two professional groups.

Cureton's research involved a three-group design used in an ex post facto quasi-experimental manner to analyze the information gained from the subjects' ($N = 44$) participation. The three groups consisted of 16 mental health professionals, 18 missionary personnel, and 10 mental health professionals with missionary experience. Cureton administered three assessment instruments to each of the three groups so that the subjects could describe the skills competence, personality characteristics, and interpersonal skills of hypothetical successful missionaries. The author describes the instruments as having multi-point dimensional scales which heightens the ability of the tests to display subject variability. However, he does not mention the validity and reliability coefficients pertaining to each test.

The Scales of Worker Functions provided a comparison of the three groups' descriptions of the minimal job performance required by an effective missionary. The descriptions given were identical which suggests that the mental health workers, missionary workers, and mental health workers with missionary experience agreed independently about the kind of competence skills necessary to be a successful missionary. This is a powerful finding that could be used by selection committees with a

high degree of reliability. Thus, according to this study, a typical successful missionary is able to minimally perform the following functions:

> (a) To influence others in favor of a point of view by verbal communications and by demonstrations; (b) to gather, collate, and classify information about data, people, and things; (c) to start, stop, control and adjust various machines and equipment designed to help them accomplish their task; (d) to make arithmetic calculations involving fractions, decimals, and percentages; (e) to use language effectively in writing routine business correspondence, understanding technical manuals and verbal instructions, interviewing applicants to determine the work best suited for their abilities and experiences, and conducting some opinion research surveys involving stratified samples of a population; (f) to devise a system of interrelated procedures applicable to solving practical everyday problems and dealing with a variety of concrete variables and situations where only limited standardization exists (Cureton, 1983, pp. 200-201).

The Successful Employment Profile (SEP) was the instrument used to compare the three groups' rankings of 27 personal and demographic traits they viewed to be necessary for successful missionary service. The correlations of the groups' rankings of these SEP traits were all .90 or higher ($p < .01$) which reflects a strong degree of congruence between the three groups. The traits that all groups agreed on were in rank order: (a) emotional maturity, (b) willingness to relate to others, and (c) flexibility. The most important criteria which all three groups agreed upon independently were "the ability to display behavior usual and expected for one's own chronological age as well as a serenity of mind and a stability of feelings in problem-solving" (Cureton, 1983, p. 198). In addition, they agreed that a successful missionary "must desire to understand and be understood by others, be willing to conform to the changing patterns of a society, and even move to another geographical location" (Cureton, 1983, p. 199). These results, in

addition to the criteria for successful missionary job performance, are powerful in their high level of congruence. In fact, these results can practically reflect the potential for support and collaboration between the perspectives of mental health professionals and missionaries.

The Osgood Semantic Differential was the instrument used to compare the three groups' perspectives of what interpersonal characteristics might differentiate a successful from an unsuccessful missionary. This instrument consists of 20 paired, polar adjectives which are rated on a 7-point scale. The subjects completed two profiles, one rating a hypothetically successful missionary and the other rating a hypothetically unsuccessful missionary. A series of *t*-tests found that all three groups identified 18 of the 20 paired adjectives as significantly differentiating ($p < .05$) between hypothetical successful and unsuccessful missionaries. The 18 pairs of adjectives that differentiated that successful from the unsuccessful missionaries were "'active-passive,' 'approach-avoid,' 'fresh-stale,' 'interesting-boring,' 'open-closed,' 'progressive-traditional,' 'genuine-false,' 'pleasurable-painful,' 'original-stereotyped,' 'understandable-mysterious,' 'graceful-awkward,' 'free-constrained,' 'complete-incomplete,' 'deep-shallow,' 'flexible-rigid,' 'accepting-rejecting,' 'predictable-unpredictable,' and 'systematic-unsystematic'" (Cureton, 1983, pp. 199-200). Thus, the successful missionary would more likely be described by adjectives such as active, approach, fresh, interesting, open, progressive, genuine, pleasurable, original, understandable, graceful, free, complete, deep, flexible, accepting, predictable, and systematic.

This study provides statistically significant criteria based on three assessment instruments that would be helpful in the selection of successful missionaries. In addition, Cureton (1983) found a high degree of congruence between mental health and mission professionals about what criteria constitutes a successful missionary. These results are extremely powerful. However, the subjects in this study were not randomly chosen

which could potentially limit the external validity of the study due to selection effects and, thus, limits the generalizeability of the results to a missionary population. Rather than constructing a design using a random sample, Cureton chose the convenience of obtaining his data from subjects who were attending a conference on the issue of mental health and missions. In addition, Cureton's results indicate that emotional maturity is an important factor necessary for successful missionary service. However, "emotional maturity" is an abstract concept which is difficult to quantify or assess at a practical level. Thus, further study of the specific qualities that would constitute a candidate's "emotional maturity" would better facilitate selection committees in their decisions. Furthermore, Cureton's use of the Osgood Semantic Differential provided general information about socially approved characteristics, but did not necessarily provide information specifically concerning successful missionaries.

Britt (1983) designed a study whereby he hoped to establish criteria for successful prediction based on pretraining variables. These pretraining variables included biographical data, psychological test data, reference data, and field interview data that could be studied before the missionary is accepted for training. A screening sample of 111 were adult overseas field staff of the Agape Movement of Campus Crusade for Christ. These subjects were involved in vocational service and Christian ministry service in which evangelism and discipleship were their primary job task. In addition to the screening sample, Britt used a calibration sample of 42 for cross-validational purposes. These individuals represented the whole population of the Agape Movement who had served for a minimum of one year. These samples were comprised of both men and women, although it is unclear as to the exact ratio. The subjects were involved in vocational service and Christian ministry service in which evangelism and discipleship were their primary job tasks.

The criterion measure with which the subjects were rated was a success inventory adapted from a rating system used by the Agape Movement. Each subject was rated on this 4-point scale in the areas of personal, emotional, social, and spiritual maturity. Seven raters were used for the screening sample. These raters included four continental Director of Affairs and three raters from the Agape headquarters. This same rating procedure was used for the calibration sample. However, due to organizational changes in the Agape Movement, the Directors of Affairs were not used as raters. The results indicated high interrater reliability coefficients for all raters (r = .48 to .80; $p \leq .001$) with the correlations being the lowest for the continental Directors of Affairs (r = .48 to .59). It was found that the subjects were generally rated as Most Successful and Moderately Successful with few subjects being placed in the two lowest success groups. In addition, in the calibration sample, most of the subjects were rated in the more successful groups with none being placed in the Least Successful group.

The independent variables in this study were taken from the information in the subjects' application files. Thus, variables from the subjects' biographical data, psychological test data, reference data, and interview data were used as predictor variables. Through the use of Stepwise Multiple Regression Analysis, twelve variables were found to be statistically significant ($p < .05$ or $p < .01$) and accounted for 56% of the variance of the success criterion. Britt (1983) then correlated these variables with the performance criterion and utilized analysis of variance to explain the meaning of each variable.

Of these 12 variables, the variable accounting for family size was found to be correlated with the variable accounting for age and served as a suppressor variable. Therefore, the 11 variables that significantly described a more successful missionary were: (a) Undisciplined verses Controlled (16 PF) with the more successful groups scoring moderately high on the "Controlled" end which Britt (1983) describes as

"...indicating they possess good work habits and keep their emotions somewhat controlled. They are dependable in organizing things and getting the job done" (p. 209); (b) Moodiness (reference questionnaire) which Britt (1983) describes as "...the least successful were more likely to experience "Moodiness" more frequently (p. 209); (c) Birth Order with a tendency for the more successful groups to represent firstborn children; (d) Forthright versus Astute (16 PF) which Britt (1983) describes as revealing "...that the more successful subjects tended to be somewhat more polished and socially aware...more insightful concerning themselves and others, and tend to promote group cohesion rather than stating their opinions. Being slightly more emotionally detached, they are able to be more effective in getting a group of people to remain on a task or goal" (p. 209); (e) Age showed younger subjects were rated more successful with 22 to 30 years olds being at the optimal age to begin overseas service ; (f) Relates to Others (field interview questionnaire) with subjects reporting that they related well with others tending to be rated as more successful overseas; (g) Response to Authority (field interview questionnaire) which Britt (1983) describes as "'...subjects whom the referents reported as 'outstanding' or 'responds with a servant's heart' tended to be rated less successful overseas, whereas those who questioned authority or struggled with directives somewhat tend to be rated more successful" (p. 209); (h) Social Poise (reference questionnaire) which Britt (1983) describes as "...the trend was for those rated above average by referents to be less successful. This trait perhaps distinguishes subjects who are very acculturated to American social mores and have a difficult time accepting other cultures" (p. 210); (i) Perseverance-Discipline (reference questionnaire) which was the variable that primarily differentiated the Most Successful group from the others. Britt (1983) reported that this variable "...indicates that referents believe these subjects showed a prior history of ability to persevere through difficulties more than most people"

(p. 210); (j) Flexibility (field interview questionnaire) which reflects how the subject responds when their plans are disrupted and which Britt (1983) describes as "those who have to struggle somewhat and 'pray about it' tend to be rated more successful than those who answered 'great' or 'trust God'" (p. 210); (k) Father Absence which indicated a trend for the Least Successful subjects to have more father absence for any five-year period prior to their 15th birthday.

Britt (1983) concludes that these predictor variables are accurate in roughly differentiating high success subjects and low success subjects. Because the sample tended to be skewed toward success, the variables are less likely to make fine discriminations between success groups. By using a calibration sample in this study, the author was able to strongly support the validity of his findings. However, due to the reduction of raters for the calibration sample (i.e., the Directors of Affairs), the reliability of his cross-validation findings was weakened. However, it will be remembered that the Directors of Affairs provided the least reliable ratings in relation to the three other raters.

Through his use of pretraining variables, Britt (1983) was able to empirically demonstrate that several objective criteria are important in the selection of successful missionary candidates. In this regard, some general statements can be made concerning the 11 significant predictor variables. First, because Britt (1983) found statistically significant predictor variables based on pretraining data and historical information, it appears that one's past behavior, past responses, and past experiences are often a strong predictor of the future. Second, the results indicate that interpersonal relationships and adaptability are important variables to consider when selecting a successful candidate. Third, one's stability of mood and ability to moderately control one's emotions predict greater success. In this regard, a candidate with a history of depression or moodiness is at greater risk for difficulty overseas.

Diekhoff, Holder, Colee, Wigginton, and Rees (1991) conducted a study to determine if there are personality trait differences that describe the effective missionary in different cultural settings. The subjects (N = 88) were American missionaries located in 11 different cultural settings in nine different countries: Egypt (N = 8), England-Asian Group (N = 7), Hong Kong (N = 7), India (N = 10), Japan (N = 8), Jordan (N = 6), Kenya-Arab Group (N = 7), Kenya-Indian Group (N = 14), Philippines-Catholic Group (N = 6), Philippines-Moslem Group (N = 12), and Turkey (N = 3). All of the subjects were from the same evangelical mission sending agency whose purpose is to plant self-sustaining churches which increases the external validity of the study by not providing confounding variables, but also limits the ability to generalize the results to a diverse missionary population.

The subjects were asked to rate the degree (5-point rating scale) to which the ideal missionary would display each of 25 attributes which were selected as representative of scales found on several widely used personality inventories (e.g., 16-PF, California Personality Inventory, Edwards Personal Preference Schedule). The 25 items were selected by one representative of the sending agency who judged the items based on their face validity.

After obtaining the ratings from the subjects, factor analysis simplified the 25 traits to a set of four orthogonal trait factors which all had eigenvalues greater than 2.0 and accounted for approximately 45% of the variance in the original 25 traits. These traits were labeled Social Skill, Personal Energy, Outspokenness, and Timidity. Analysis of variance was then used to ascertain whether there were any cross-cultural differences between the 11 cultural settings and these four traits. The results found that the ideals described by those working within the 11 cultural settings examined were found to differ significantly on two of the four orthogonal trait factors, Outspokenness ($F[10, 77] = 5.37$, $p = .0001$) and Timidity ($F[10,77] = 2.56$, $p = .01$). Thus, these results indicate that

the profile of an ideal missionary would vary across the 11 cultures based on the candidate's relative degree of outspokenness versus timidity.

Diekhoff et al. (1991) further simplified their data from the 11 cultural settings by identifying two clusters of relatively homogeneous ideal missionaries through the use of multidimensional scaling analysis. These two culture clusters were represented by Moslem (represented in this study by Turkey, Jordan, Egypt, Kenya-Arab Group, and Philippines-Moslem Group) and East Asian (represented by Japan, Hong Kong, Philippines-Catholic Group, Kenya-Indian Group, India, England-Asian Group) cultures. The Moslem and East Asian culture clusters were then compared on the four trait factors to assess any differences between the clusters. These two broad clusters of ideal missionaries were found to differ significantly only on the trait factor of Timidity ($t = 2.31$, $df = 86$, $p = .02$). Thus, the ideal missionary working in a Moslem cultural setting would be described as significantly more timid than the East Asian ideal .

Diekhoff's et al. (1991) results support the premise that certain individuals will perform more effectively when they have certain personality traits that correlate with the particular social demands of any given foreign culture. For example, their findings support that a person with a timid character would likely work more successfully in cultures that favor passivity, inactivity, and a more deferential attitude. This approach to selection requires much more study and further delineation of "matches" between foreign cultures and personality types. In addition, the groups represented in each of the 11 cultural settings were not randomly assigned to conditions, were not equal in number of subjects, and were not represented by a large sampling of subjects all of which affected the internal validity of this study to some degree. Diekhoff's et al. (1991) contribution to the literature at this time is the finding that a candidate's personality style can affect his/her degree of success based on the goodness of fit between the foreign culture he/she will work in and his/her personality traits.

Discussion

Five studies have been found in the literature that address the issue of missionary selection. Four of these five studies have shown through statistical analysis that there are general criteria that can be used with varying degrees of reliability to predict missionary success. Rather than using a statistical design, Ferguson et al. (1983) completed a descriptive study of a large sample of mission agencies in order to ascertain the standard selection processes and criteria of these agencies. This study provides baseline qualitative and quantitative data for mission agencies in regard to selection procedures.

It appears from the results of these studies that there are some basic qualities that distinguish a successful missionary from a less successful missionary. It seems that the successful missionary has a general flexibility of character that enables him/her to adapt to the patterns of a foreign society (Britt, 1983; Cureton, 1983; Kennedy and Dreger, 1974). He/she would be sensitive to, and curious about, cultural differences. After learning about the culture's social mores, the candidate would be able to enter the culture and relate with people in a manner that is acceptable and culture-specific. In addition to flexibility of character, the successful candidate would also demonstrate a high degree of interpersonal skills and a history of strong and connected relationships (Britt, 1983; Kennedy & Dreger, 1974). In order to adjust to the foreign culture and establish relationships, the candidate would have the flexibility of character and necessary interpersonal skills to understand and accept a diverse kind of people and ideas (Ferguson et al., 1983; Kennedy & Dreger, 1974;). The candidate would not only have to be culturally and relationally adaptable, but he/she would also have to be able to move to another geographical location (Cureton, 1983). Because one's history is a powerful predictor of success (Britt, 1983), the successful candidate would more likely have negotiated previous geographic transitions effectively.

Furthermore, it seems that a more successful missionary would display an overall emotional stability. Thus, the candidate would have a relatively stable mood and ability to maintain a peace of mind and stability of feelings during problem solving. Although the candidate can moderately control his/her feelings, he/she maintains the ability to respond at an affective level and may question authority when he/she disagrees with a directive. In this regard, the successful candidate is able to think independently and demonstrates leadership abilities. The candidate is able to solve practical problems, possesses good organizational skills, promotes group cohesion, and has the ability to keep a group task-focused (Britt, 1983; Cureton, 1983; Ferguson, 1983; Kennedy & Dreger, 1974).

Further research in the area of missionary selection remains to be done concerning more specific criteria for success based on the particular job task assigned to the missionary. Cureton (1983) observes the need for further study in this area and suggests using criterion-related validity based on the skills needed for the particular job and the candidate's ability to successfully accomplish the given task. Furthermore, it remains unclear as to whether the setting that the missionary works has any effect on his/her success. For example, do certain people function more successfully in a rural setting versus an industrial setting? In addition, further research is needed concerning specific cultural demands and the candidate's ability to negotiate these demands. It is important that the candidate be flexible and adaptable in regards to cultural variance, however, research on the goodness of fit between a candidate's personality traits and the specific culture or job description would enrich the preliminary findings of Diekhoff et al. (1991).

Missionary Stress

The experience of stress could be described as "...a non-specific response of the body to any demand made upon it. A natural by-product of all our activities, stress is thus a

normal part of everyday life. Just as a violin with strings too loose will moan, so too little stress results in boredom. But a too tightly strung violin will screech, and, if the pressure continues to increase, will snap. On the human level, too much stress results in eventual breakdown" (Gish, 1983, p. 236). Missionaries can be subject to stress resulting from such factors as culture shock, language barriers, raising monetary support, sending children to boarding school, a lack of privacy in the missionary community, and feelings of intense loneliness. Thus, researchers have conducted both empirical and descriptive studies in order to better understand the stressors that missionaries often encounter and live with on the field.

In addition to studying the effects of stress on the missionary, researchers have also studied the effects of burnout in missionaries. Although the authors reviewed in this paper agree that burnout is a state of deep emotional depletion and exhaustion, they view the origins of burnout from different perspectives. For example, Chester (1983) uses Pines and Aronson's definition which states that "'burnout is the result of constant or repeated emotional pressure associated with an intense involvement with people over long periods of time"' (p. 30). Dyment (1989), on the other hand, uses Freudenberger's definition of burnout which states that burnout is "...the process whereby a person 'wear[s] oneself out by excessive striving to reach unrealistic expectations imposed by oneself or by the values of the society'" (p. 3). The difference between these two authors appears to be that one views burnout from a relational perspective and the other views burnout from a cognitive perspective.

Although researchers have only recently begun to study the stressors involved with missionary life abroad, Price (1913) collected numerous data on missionary stressors that were the cause of attrition, retirement, and death in the early 1900s. He obtained his data through review of Church Missionary Society records ($\underline{N}$ = 1,051) and personal

interviews (N = 428). The subject sample included 652 men and 827 women. These subjects were serving in India (N = 533), Ceylon (N = 65), China (N = 394), Japan (N = 105), Africa (N = 339), Madagascar (N = 14), and Persia (N = 29). In addition, he made note of the number of missionaries who either temporarily or permanently were unable to persevere on the mission field.

Although Price's data is largely medical in nature, he notes that nervous and mental diseases (which encompasses irritability, nerve strain, depression, suicidal depression, mania, and religious delusions) were the most common reasons accounting for both a permanent and temporary leave of absence from the mission field. He notes that tropical diseases, hot climates, earthquakes, air pollution, primitive living conditions, isolation, violent uprisings, and heavy work were thought to precipitate the subjects' experience of mental illness. He concludes that a missionary's work involves great risk to one's physical and mental health.

This study provides clear historical evidence of missionary hardship and the resulting psychological stress that can ensue. Even though this study was completed 80 years ago, it is interesting to note that many of the precipitating stressors that Price noted continue to be stressors for missionaries today. This study gives historical credence to the fact that missionaries do indeed experience a number of stressors while living abroad that can potentially disrupt their ability (either permanently or temporarily) to serve in a missionary role.

Chester (1983) designed a study in which he hypothesized that missionaries would report higher levels of stress as missionaries living in a foreign culture as compared to the stress they felt in their cultures of origin. He formulated a questionnaire incorporating the Pines and Aronson Tedium/Burnout Self Diagnosis instrument in order to survey 100 married couples who were living and working in foreign cultures. The sample's mean age

grouping was 41-45 with husbands and wives married for 16-20 years. This sample was randomly selected and represented people from a evangelical theological perspective.

The survey contained 13 questions pertaining to basic demographic information in addition to the Pines and Aronson Tedium/Burnout Self-Diagnosis scale. This scale contains 21 questions regarding the experience of stress and burnout and is rated on a 7-point Likert scale. The author did not provide validity or reliability coefficients for this instrument. In terms of the construct being measured, Pines and Aronson defined tedium and burnout as both resulting from exhaustion reactions. More specifically, "'tedium can be the result of any prolonged chronic pressures (mental, physical, or emotional) and burnout is the result of constant or repeated emotional pressure associated with an intense involvement with people over long periods of time'" (Chester, 1983, p. 30).

The results indicate that 30% of the husbands (24% of the wives) reported that they felt missionary life was very stressful, 67% of the husbands (62% of the wives) felt missionary life was somewhat stressful, 3% of the husbands (14% of the wives) reported that missionary life was less stressful than their life before missionary service. In addition, 59% of the husbands (62% of the wives) reported being personally under more stress as a missionary; 29% of the husbands (29% of the wives) said they were personally under the same amount of stress; and 12% of the husbands (9% of the wives) reported being personally under less stress as a missionary. In regards to the subjects' tedium/burnout scores, the mean score for both husbands (mean score of 2.95) and wives was found to be low (mean score of 3.06) in comparison to studies done with other persons involved in professions such as social work, nursing, education, and counseling. However, Chester did not perform any statistical tests to see if this difference was statistically significant. Although the mean tedium/burnout scores for this group did not indicate that the members as a whole felt more stressed than other professional helping groups, the wives' scores were higher then the husbands' scores in most countries and

indicated that the wives were feeling higher degrees of stress. Chester (1983) notes that he did not find a "correlation" (p. 35) between tedium/burnout and time married or time on the field for the wives. However, the author provided no information indicating that he had performed any kind of statistical analysis on the data and reports no correlations.

According to Chester (1983), these results do not support his original hypotheses that missionaries would be found to be living under more stress on the mission field than in their culture of origin. He found that even when missionaries reported they were under a 'tremendous' amount of stress, their tedium/burnout scores were low. Thus, Chester (1983) stated that "...these missionaries do not comprehend the true stress under which they live or that they do not feel that they should show so much stress and so try to ignore it" (p. 34). In addition, Chester (1983) interpreted the variability of the subjects' responses to the two questions (a) whether they found missionary life to be stressful (30% of the husbands and 24 % of the wives indicated missionary life was very stressful) or (b) whether or not they were 'personally' under more stress (59% of the husbands and 62% of the wives felt they were 'personally' under more stress) to mean that "...the majority of missionaries believe the other missionaries are not facing much stress, and yet this same majority see themselves as being personally under a lot of stress" (Chester, 1983, p. 34). He goes on to state that the missionary is in effect saying, "'Though I'm under a lot of stress I cannot let the others know. I don't understand why they look so calm and seem to not be under much stress. I must keep up my front of calmness'" (Chester, 1983, p. 35).

Chester's interpretations of these data are difficult to understand or follow. It seems possible that missionaries simply felt they were "generally" under less stress and "personally" under greater stress. The subjects' may have understood the question concerning general stress to include their work and found their jobs less stressful than managing their relationships at home. However, it is not clear how the subjects interpreted the two statements. In this regard, Chester's interpretation of the data is far

too certain than the data warrants. Chester (1983) then concluded that based on the low tedium/burnout scores and variability of responses about general versus personal stress that "the missionary must keep up the image of the 'Super Saint' who is impervious to pain and problem alike" (p. 35).

This results of this study must be regarded with caution. Chester (1983) runs the risk of regarding his data as causative and takes some liberty in his rather certain interpretation of the results. From an empirical perspective, Chester has no statistical basis for his interpretations of the data. He did not perform any kind of statistical analysis of his data to indicate statistical differences or correlations.

Gish (1983) completed a study in which she created a 5-point Likert scale questionnaire in an attempt to identify specific stressors for missionaries in active service. The 65 items came from a variety of sources: extensive review of the literature, discussion with missionary society executives, conversations with missionaries, extrapolations from a psychologist working with missionaries, and the author's personal experience in a missionary capacity. Item selection for the questionnaire was based on a method whereby each item had to be applicable to all missionaries regardless of their age, sex, or marital status. The author then subjected the instrument to several revisions after it was pretested on missionaries and critiqued by missionary psychologists and mission executives.

Gish (1983) administered this questionnaire to a large sample ($\underline{N}$ = 549) representing missionaries serving in various fields (Australia, Canada, Hong Kong, Japan, New Guinea, Philippines, Taiwan, and Zambia) and with various mission boards. This large and diverse sample size heightens the ability to generalize these results to the general population of missionaries. Gish (1983) hypothesized that 8 independent variables would have an effect on the degree of stress reported. These mediating variables were the missionaries' place of service, age, sex, marital status, nationality, length of service on the

field, type of service, and average number of hours a week on the job. Analysis of variance was used to analyze the subjects' responses to each of the 65 source items relative to each of the independent variables. If a significant difference was found through the analysis, the Scheffee posteriori contrast test was used to locate the difference.

The results from the questionnaire indicated that 19 items caused considerable or great stress for more than 30% of the subjects. The two items that accounted for the greatest amount of stress were confronting others and communicating across language-cultural barriers. Not surprisingly, Gish (1983) found that women ,"...who are traditionally socialized to be 'nice'" (p. 241), find confrontation significantly more stressful than do males. The third largest cause of stress was the time and effort required to maintain relationship with donors. It was found that interdenominational faith groups (68% of the sample), who are responsible to raise and maintain their own support, experienced considerable to great stress in contrast to the denominational groups whose support is provided by the denomination. The fourth identified cause of stress was too much work. In addition, decisions about work priorities, insufficient progress on work, and having too many decisions that affected the lives of others were sources of considerable stress for over a third of the missionaries.

In terms of the eight mediating variables hypothesized as having an effect on the subjects' degree of stress, seven of the variables were found to be significant. First, in terms of place of service, significant ($p < .05$) site differences emerged on items such as health hazards, physical dangers, climate, co-workers' paternalism towards nationals, and stress relative to the subjects' relationships with the nationals which all varied negatively or positively depending on the country of service. These data tend to correspond with Price's (1913) data which indicates that physical and geographical variables continue to

be a significant stressor in the lives of missionaries despite the historical era of his research.

Analysis of 11 statistically significant ($p < .05$) sex differences revealed that women indicated all but one of those stressors to be significantly more stressful then did men. In terms of age, the missionaries who were 25-29 years old experienced significantly ($p < .05$) more stress in regards to loneliness and isolation, lack of pastoral care, inadequate rest, and housing policies. The 30-34 year-old missionaries reported significantly more stress concerning inadequate rest and the "fish bowl" existence. In addition, the missionaries who were 25-29 years old and 35-39 year olds experienced significant stress because of travel difficulties. In terms of marital status ($p < .05$), the missionaries who were married experienced their relationship with their spouse and the lack of money to be more stressful than single missionaries. Missionaries who were single experienced more stress in regards to loneliness, isolation, and self-acceptance compared to the married missionaries.

In terms of the years of service, the missionaries who had been serving in a foreign culture for 18 months to 4 years experienced significantly ($p < .05$) more stress over loneliness and isolation, inadequate diet, lack of pastoral care, type of housing, living conditions, travel difficulties, and the "fish bowl" existence. Those missionaries who had served 15 to 19 years on the field indicated more stress concerning their relationships with their spouse, their relationships with local and government officials, and the political stability of their host country than those missionaries who had been there less then 5 years. In addition, those missionaries serving 15 to 19 years felt more stress regarding their futures than those missionaries who had served 20 years or more.

In terms of the type of service, the missionaries involved in literacy and translation work reported significantly ($p < .05$) more stress than support personnel over the lack of tangible results in their work, having a different temperament from that valued by the

host culture, loneliness and isolation, and self-acceptance. In addition, the literacy and translation personnel experienced significantly more stress than either support or education staff surrounding insufficient progress on their work, demands of national co-workers, conflicts between personal values and those of the host country, maintaining public relations with local and government officials, relationship with spouse, and relationship with nationals. However, in comparison to the literacy and translation personnel, support and education personnel experienced significantly more stress from the feeling that some co-workers devalued their jobs. In regards to the amount of time on the job, missionaries who worked more than 50 hours a week were found to have significantly ($p < .05$) higher stress ratings.

Gish (1983) found that some missionary groups do in fact experience more stress than other missionary groups. Gish's positive results may in part be due to the fact that she created an assessment instrument specifically for the assessment of missionary stressors, allowed for the complexity of different kinds of stress in different situations, and was able to capture the perhaps idiosyncratic nature of stress in the missionary's life. The rich results of Gish's (1983) study serve to reiterate the usefulness of assessment instruments designed for missionary use and careful assessment of mediating variables.

Taylor and Malony (1983) used the Buss-Durkee Hostility Inventory (BD) to assess the level of, and expression of, anger and hostility in missionaries ($\underline{N} = 34$). The authors used Buss' definition of hostility, "'an attitudinal response that endures'" (p. 220), to differentiate the meanings of hostility and anger. Because stress experiences often result in frustration and anger, the authors hypothesized that due to the strain and stress of the missionary vocation (e.g., culture shock, language barriers, monetary support, education of offspring, lack of privacy, intense loneliness, and slow tangible work results), the overall hostility scores for their sample would be higher than the BD norms. The authors note that the BD has been designed to differentiate between sub-classes of hostility and

defines hostility in seven subcategories including assault, irritability, indirect hostility, negativism, resentment, projection of hostility onto others, and verbal hostility. Although the authors comment on the satisfactory reliability and validity estimates of the BD shown through empirical study of the instrument, they fail to provide the actual coefficients. The researchers included a one-item, self-report stress index rated on a 5-point Likert scale.

The authors divided the subjects into two groups - Group 1 was comprised of missionaries on the field in Europe and Group 2 was comprised of missionaries home on furlough and attending the School of World Missions at Fuller seminary. Another independent variable taken into account was the number of years spent on the field. In addition, one of the researchers visited the individual, onfield homes of each missionary in Group 1 to discuss with them their perceptions of missionary life.

The results of this study did not support the authors' hypothesis that they would find higher overall hostility scores in their sample as compared to the BD norms. In fact, the missionaries from both groups reported statistically significant ($p < .01$) lower levels of hostility on five of the scales than reported on the norms for the BD. The additional two scales, indirect hostility and negativism, showed no significant differences from the norms. In addition, no significant differences were found between the scores for male and female subjects. However, the statistical analysis did find that indirect hostility was a significant interaction effect for this sample ($F\ [1, 30] = 5.42, p < .05$). The mean indirect hostility scores were found to be higher for those male missionaries serving on the field. However, the authors caution that this finding could be due to chance because of the separate analysis of variance computations performed on each of the seven subscales. In addition, the number of years spent on the field showed a significant ($p < .05$) correlation with higher degrees of reported stress and number of irritability responses.

Taylor and Malony (1983) note that one possible conclusion based on the depressed hostility scores of the missionaries is that the missionaries were simply less hostile than the norm group. However, the authors found these depressed results to be inconsistent in light of their interviews with the individual missionaries on the field. Most of the missionaries on the field reported to the interviewer that they felt pressure to behave in certain ways and felt that the expression of anger was inappropriate. Although some missionaries responded positively to the request for an interview, they evidenced resistance when the researcher arrived (i.e., refusing to fill out the inventory).

The authors observed that they cannot merely discount the low hostility scores based on data from discussions and ad hoc statements. Thus, the authors considered alternative explanations for the depressed scores. First, because lack of privacy was mentioned by most subjects as a problem, the missionaries may have attempted to achieve some degree of privacy through declining self-disclosure. Second, because all of the missionaries who were interviewed stated that they experience pressure "...to present a good picture of themselves in their work" (Taylor & Malony, 1983, p. 223), the low scores may reflect the unacceptable nature of hostility reactions rather than a lack of hostility. In this instance, Taylor and Malony (1983) provided interview data to support their interpretation that missionaries are concerned about their self presentation, in contrast to Chester's (1983) unsubstantiated theory of the same nature.

In light of these conjectures, the two scores which showed no significant differences from the norms, indirect hostility and negativism, may indicate that the most acceptable expressions of hostility for this sample of missionaries are indirect ones. This style of hostility expression, combined with a pretense that nothing is wrong, is extremely difficult to deal with at an interpersonal level. Dynamics such as subtle undermining of relationships, angry or sarcastic undertones, and criticism are inherent to the indirect expression of hostility. With this line of reasoning, the authors interpreted the correlation

between increasing years on the field and an increasing perception of stress to be a possible reflection of years of being unable to deal directly with feelings of anger and this repressed anger increasing their stress at work.

Taylor and Malony's (1983) results give some tentative indication that missionary personnel may struggle with the ability to be open with their feelings of stress and anger. However, due to the nonrandom sampling of the general missionary population and the small sample size (N = 34), the results of this study should be considered preliminary and generalized to other missionary personnel with caution. This study, in contrast to Chester's (1983) conjectures concerning missionary self disclosure, provides data through self-report that the missionaries studied in this sample may often feel pressured to monitor their behavior and self disclosure in a manner that is not always helpful to them. Gish's (1983) finding that the greatest source of stress for missionaries was in confronting others adds further validation to the premise that missionaries have difficulty directly acknowledging their anger, frustration, and stress in interpersonal settings.

Gardner (1987) designed a descriptive study in order to collect preliminary data on career transitions and the accompanying stresses experienced by missionaries. A questionnaire containing five questions was administered to 47 subjects who were members of the Wycliffe Bible Translators. These subjects (29 men, 18 women) represented three different vocational groups within the Wycliffe organization (pilots and mechanics; administrators and office workers; counselors and caregivers).

Gardner found that the missionaries served an average of 15.2 years and had averaged three years per job assignment. Out of the missionaries who had served in the organization for more than five years, only one missionary remained in the same job he had originally been contracted for. Although several of the missionaries were still in their original jobs, they had added responsibilities. In addition, some of the missionaries were still working in their original jobs but in a different location.

Some of the career transition issues that were areas of internal conflict for these missionaries were (a) the loss of roots and a place, (b) responsibility for the effects that the change has on family members, (c) being asked to meet an organizational need for which they do not feel gifted, (d) feeling inadequately prepared to meet the demands of the new task, (e) personal tolerance for change and ability to make effective transitions, (f) self esteem issues around leaving last task unfinished and feeling inadequate to successfully perform the next task, (g) attitude toward authority and whether they should comply with every request for his/her services. The author states that the subjects struggled with these conflicts with varying degrees of success. Those who were unable to cope adequately showed symptoms such as "...tension, irritability, fear, lethargy, criticalness, anxiety, clinging to the old and familiar, clustering or consolidating rather than venturing, indecisiveness, withdrawal, [and] perhaps anger" (Gardner, 1987, p. 345).

Dyment (1989) conducted a study in which he assessed missionaries ($\underline{N}$ = 424) feelings of burnout in relation to three job variables. These variables were role conflict (job overload and conflict of duties), role clarity (respondents perception of the objective clarity of the job description), and need for clarity (respondents perception of the subjective need for job clarification). In addition, the author hoped to find out what kind of relationship existed between unrealistic expectations and the incidence of burnout among missionaries. Unrealistic expectations were defined in this study as perfectionism, having an achievement identity, and omnipotence.

Dyment (1989) operationalized the unrealistic expectations variables using Moore's definitions of the three constructs. Thus, a high degree of perfectionism was defined as those individuals who tend "...to set unrealistic, impossible standards for themselves. They are hooked on reaching for nothing short of magnificence in anything they do. Such people are not able to set flexible personal goals and hence compulsively strain to measure up to standards that are high beyond reach or reason" (pp. 14-15). Having a high

achievement identity was defined as being "the sense of personal worth and meaning.... excessively attached to feeling successful, especially relative to work endeavors" (Dyment, 1989, p. 16). The presence of high omnipotence attitudes was defined as those individuals who "...tend to see themselves as the center of their personal universe and to hold themselves personally responsible for much of what goes on around them. They see themselves as in control of other adults and thus responsible for them. Such individuals tend to personalize events and to blame themselves inappropriately. They have difficulty recognizing and accepting their human limitations" (Dyment, 1989, p. 17).

Dyment (1989) used the Maslach Burnout Inventory (MBI) to measure the missionaries' experience of burnout. The MBI scales measured the level of the subject's emotional exhaustion, depersonalization, and lowered personal accomplishment. This instrument is reported to have an overall reliability coefficient of .83. Dyment used the Weissman's Dysfunctional Attitude Scale (Cronbach coefficients ranging from .64 to .83 for the various scales) to measure unrealistic expectations and used the Role Clarity Index (split-half reliability = .70), the Need for Clarity Index (split-half reliability = .82), and an adaptation of Lyon's job Tension Index (split-half reliability = .82) to measure the job variables.

Dyment (1989) created a survey containing each of these instruments which he mailed to missionaries primarily representing Wycliffe Bible Translators and Conservative Baptist denominations in 33 countries. In addition to these instruments, the author included a measure to assess the confounding influence of social desirability. This measure was a 7-point Likert-type adaptation of the 30-item K-scale from the MMPI.

The results of this study indicated that in general job factors are likely to be more prominent issues in missionary burnout than are personal expectations. Even when social desirability was controlled, role conflict was observed to correlate significantly

($p < .001$) with four of the six MBI measures. In fact, of all the independent variables measured, role conflict emerged as the strongest variable. Role clarity was found to correlate negatively and significantly ($p < .05$) with all the burnout scales, indicating that burnout increases as the clarity about one's job decreases. The need for clarity was found to have the weakest correlative relationship with burnout.

In addition to job variables, Dyment (1989) found significant correlations between the unrealistic expectations variables and burnout when social desirability was controlled. The relationship between achievement identity and MBI burnout variables appeared to be the most robust of the three unrealistic expectations variables and was found to correlate with greater levels of burnout on all scales examined ($p < .01$ and $p < .05$). Even though respondents scored higher on perfectionism than either achievement identity or omnipotence, perfectionism was not found to be very strongly related to burnout. This finding suggests that while missionaries may tend to demand much perfection from themselves, this characteristic is not as strongly related to burnout as the other dysfunctional attitudes measured. Partial correlations between omnipotence and MBI measures were found to be significant ($p < .01$ and $p<.05$). The author speculates that due to their level of grandiosity, the missionaries may have not been inclined to fully disclose their negative feelings, and thus, affected the degree of burnout they reported.

Through his survey, Dyment (1989) also collected extensive demographic data on his subjects. The demographic factors were far less associated with burnout than the job variables or unrealistic expectations. However, missionaries with high burnout scores tended to be:

> (a) younger, (b) more recently or unhappily married, (c) involved in continuing education, (d) desirous of a further degree, (e) placing a high importance in attaining another degree, (f) far less experienced in missionary service, (g) new to an assignment, (h) involved in translation or middle management rather than

administration, (i) receiving less financial support, (j) dissatisfied with his/her mission agency, and (k) dissatisfied with current housing arrangements (Dyment, 1989, pp. 48-49).

Dyment (1989) also found that the missionaries in the highest burnout group reported several stressors as the most frequent factors contributing to burnout in rank order: "(a) frustration with leadership, (b) work overload, (c) family and child responsibilities, and (d) cultural differences, sickness, and housing problems which were relatively equal in frequency" (Dyment, 1989, p. 51).

Dyment (1989) has shown through empirical analysis that missionaries suffer from stress and burnout. These results, building on Gardner's (1987) findings concerning the stress involved with missionary career transition, underscore that job variables have an important impact on missionaries' feelings of burnout. Although not the primary source of stress, Gish (1983) found that job variables such as too much work, decisions about work priorities, insufficient progress on work, and having too many decisions that affect the lives of others were rated as considerable or greater sources of stress for over a third of the missionaries she surveyed.

Discussion

Six articles have been found in the literature which address the issue of missionary stress and burnout. The majority of these studies were found to have used research methods and designs that insure the validity of their results. However, Chester (1983) failed to use statistical analysis on his data and consequently the results and conclusions must be used with great caution. In addition, Taylor and Malony (1983) used a small, nonrandom sample of missionaries which limits the validity and generalizeability of their findings.

The literature concerning missionary stress and burnout currently demonstrates that missionaries do suffer from stress reactions. If Chester's (1983) results are observed from

an alternative perspective, 97% of the husbands and 86% of the wives he surveyed felt that missionary life was either somewhat or very stressful. These results, in addition to the other studies, indicate that missionaries are reporting that they experience stress. However, it has also been found that missionaries feel a pressure to present a good image of themselves in their work and have also been found to have a significant level of grandiose and omnipotent characteristics. Thus, it is possible that missionaries may also struggle with disclosing the full extent of their negative feelings (Dyment, 1989; Taylor & Malony, 1983).

Although further research needs to substantiate the preliminary findings that missionaries may have difficulty acknowledging feelings that may not always be socially desirable, it has been found that missionaries experience a great amount of stress over confronting others (Gish, 1983). In addition, it has been found that missionaries often feel that the expression of anger is inappropriate and may prefer to express their anger through more indirect means (Taylor & Malony, 1983). Thus, it appears that missionaries may tend to experience conflict and stress about how to appropriately manage their feelings of anger in interpersonal settings. Specifically, women missionaries and wives generally report higher levels of stress and feel significantly greater stress about confrontation (Chester, 1983; Gish, 1983). In addition, missionary personnel involved in literacy and translation appear to be at a higher risk of stress and burnout (Dyment, 1983; Gish, 1983). Further research examining stress in translation personnel and women on the mission field would be warranted by these preliminary findings. In addition, counsel for missionaries concerning appropriate and healthy ways to express angry feelings would be beneficial to alleviating some of their stress.

These studies have indicated that there are several common precipitating factors to missionary stress which seem to stem from two sources - interpersonal and job factors. Job factors such as frustration with leadership, the time and effort required to maintain

relationships with donors, frequent career transitions, too much work, lack of job role clarity, decisions about job priorities, and having too many decisions that affect the lives of other are some of the stressors facing a missionary on the field (Dyment, 1989; Gardner, 1987; Gish, 1983). Furthermore, interpersonal factors such as confronting others, communicating across language-culture barriers, a lack of privacy in the missionary community, isolation, and family responsibilities and relationships have been found to create stress for the missionary (Dyment, 1989; Gardner, 1983; Gish, 1983; Price, 1913).

In summary, these studies on missionary stress point to the need for more sophisticated and carefully designed research. In this regard, Gish (1983) has demonstrated a high degree of sophistication through the use of a carefully designed assessment instrument and the consideration of mediating variables. Gish's (1983) thorough approach and use of statistical analysis enabled her to capture the complex and often idiosyncratic nature of missionary stress.

Missionary Functioning

Although the research on missionary personality functioning is less extensive than selection or stress, researchers have set out to explore the psychological adjustment of the missionary. Interest concerning the personality of the missionary and his/her occupational choice, the ability to persevere in the field, and women in missions have instigated further psychological study of the missionary.

Paluszny and Zrull (1971) evaluated a sample of 50 (men = 21, women = 29) missionaries over a four-year period. These missionaries represented Methodist, Free Methodist, and Episcopal denominations. The researchers set out to evaluate each candidate in terms of basic personality, the extent of psychological disturbance, and the motivation for entering the field. The method for collecting data consisted of referring to

the psychological testing, biographical data, and references that each mission board had collected on the candidates. Each candidate had psychological testing which included the Weschler Adult Intelligence Scale, Draw-A-Person, Sentence Completion, Bender Gestalt, and Rorschach tests.

The authors found that of the 50 candidates, seven were found to have significant psychological problems. The authors described each of the seven missionary candidates with the use of qualitative vignettes. These seven candidates were most frequently described as dependent, depressed, and/or schizoid. However, beyond these interpretive descriptions, it was unclear as to which personality characteristics would constitute "...rather serious difficulties" (Paluszny & Zrull, 1971, p. 364)). In terms of the other 43 candidates, the authors report finding persistent similarities in the candidates' personalities. Due to the reported commonalties, the authors formulated a composite profile of the average, well-adjusted candidate.

Thus, the candidates were described as friendly and polite, but often reserved in their interpersonal interactions. They were well aware of social cues and dynamics, however, the candidates seemed to be emotionally constricted and lacked an awareness of feeling in themselves and others. Because of their affective constriction, the candidates lacked a sense of spontaneity on an interpersonal level. However, the candidates were found to have led active and energetic lives both socially and professionally. They tended to be efficient in their jobs and related well with their co-workers and supervisors. Interestingly, these candidates rarely explained their interest in the mission field because of religious reasons. Instead, the candidates most often reported that they entered missions because of a desire to serve man. This finding could be a reflection of the sample's more liberal or humanistic theological perspective.

The results indicated that the candidates' motivation for entering the mission field stemmed from one of two sources. In the first group, the candidates reported that the idea

of becoming a missionary was present at a young age. Religious teachings, encouragement by an important person in the candidate's life, and a general attitude of service were similar factors found to be present in these candidates' backgrounds. In the second group, the candidates reported that they were attracted to a profession in missions because missionary work seemed to be a logical outgrowth of their careers as teachers, nurses, and/or ministers. In conclusion, the authors report that they were pleased to find that the severity of psychopathological disturbance was not greater than that found in the general population.

Paluszny and Zrull (1971) used a database consisting of psychological testing, biographical data, and references from which to study the level of psychological functioning of these 50 candidates. However, the authors chose not to report this quantitative data as they thought that the results from the testing paralleled their clinical impression. This omission, in addition to not reporting the sources of data in their interpretation regarding the "pathological" candidates, limits the reader's ability to interpret the general validity of this study. In addition, the authors fail to clearly delineate the criteria used for diagnosing a psychological disturbance. However, it appears that the authors more frequently referred to characterlogical disturbances in the candidate's personality, such as a dependent or schizoid style of functioning.

King (1975) completed a study on 130 (women = 72, men = 58) professionals working overseas to explore the effects of depression on this overseas population. She used a structured diagnostic interview in order to inquire about the following psychiatric syndromes: depression, mania, schizophrenia, organic brain syndrome, antisocial personality disorder, alcoholism, drug dependence, hysteria, anxiety neurosis, obsessive compulsive neurosis, and phobic neurosis. King (1975) selected the 130 subjects based on their ability to function competently and therefore persons with psychological disorders that had an onset early in life, such as antisocial personality and schizophrenia,

were screened out. The sample included missionaries, teachers, medical workers, and business personnel though the numbers were not specified. In contrast to the study completed by Paluzsny and Zrull (1971), this author clearly based her diagnoses on the standard diagnostic criteria used in the psychiatric profession. Thus, the individual had to report at least five of nine depressive symptoms in order to receive a diagnosis of depressive syndrome.

The results indicated that depression was the most common psychiatric illness found, with 17 of the 130 subjects meeting the criteria for a depressive syndrome. No subjects met the criteria for any of the other diagnosis studied. Chi square analysis was performed on the independent variables (age, sex, marital status, whether the subject was a candidate or on furlough when first seen, family history of depression and alcoholism, and obviously stressful events) and no significant difference was found for those with a depressive syndrome compared with those with few or no depressive symptoms. In addition, King (1975) performed a four-year follow up on these subjects and found that the 47 subjects who had reported one to four depressive symptoms at the initial interview either had the same or (usually) fewer symptoms at follow-up. In addition, 11 of the people who had had depressive syndromes or a history of them when first interviewed did not meet the criteria during the follow-up interview. The three individuals who continued to have a depressive syndrome during the follow-up interval were less severely ill than they had been before, although two of them required continued treatment. Three subjects who had not had depressive syndromes at the initial interview developed affective syndromes during the follow-up interval.

Based on her finding that the subjects' frequently experienced a remission of depressive symptoms and maintained the ability to continue to function competently when depressed, King (1975) emphasizes that it seems reasonable not to exclude persons with diagnosable depressions from overseas assignments. However, during initial

evaluations, it remains important to identify those persons with depression and recommend treatment when necessary.

King's (1975) method of collecting data, the criteria used for diagnosis, the statistical analysis of the data, and the specific reporting of results substantially increases the validity of this study as compared to the previous study reviewed. Although this study in not easily generalized specifically to a missionary population because of the diversity of professionals represented in the sample, it provides preliminary data and hypotheses for further research. Based on the previous findings from the stress and burnout literature, missionaries often experience relatively intense feelings of stress and burnout. These feelings, in addition to the reported pressure to present a good image, could potentially fuel symptoms of depression.

Dillon (1983) designed a study to explore the difference between the scaled score means of evangelical missionaries and the means of the norm population as evaluated by the Minnesota Multiphasic Personality Inventory (MMPI). In addition, Dillon (1983) compared the mean scores of the missionaries with the norm group on the basis of gender. In order to do this, Dillon (1983) analyzed the Validity, Standard, K Corrected Standard, and four Auxiliary subscales for statistical significance with the use of single group *t* tests. Secondly, the author used analysis of variance to compare the MMPI scale means of persevering and nonpersevering evangelical missionaries on the variables of gender, education, age, and the year in which the MMPI was taken. A nonpersevering missionary, in contrast to a persevering missionary, was defined as a person who failed to fulfill their career commitment as a missionary and resigned from their assignment. The subjects ($\underline{N}$ = 827) studied were administered the MMPI over a 30 year period.

The results indicated that those MMPI scales in which the means for the missionary sample were significantly higher than the norm population were: L (Lie), K (Self Enhancement), Hy (Hysteria), Mf (Masculinity/Femininity), Pa (Paranoia) except for the

female mean, Si (Social-Introversion) except the total group and female means, Hs (Hypochondriasis K corrected), Pd (Psychopathic Deviate K corrected), Pt (Psychasthenia K corrected), Sc (Schizophrenia K corrected), Ma (Hypomania K corrected) on the male mean, Es (Ego Strength, and Do (Dominance). Those MMPI scales in which the missionary means were significantly lower than the norms were: F (Confusion), Hs (Hypochondriasis), D (Depression) except the male mean, Pd (Psychopathic Deviate), Pt (Psychasthenia), Sc (Schizophrenia), Ma (Hypomania K corrected) on the female mean, Dy (Dependency), and Cn (Control).

Dillon (1983) interpreted these results to mean that the average missionary tended to project the best possible appearance (K scale) and was somewhat visionary and impractical. Even though the missionary was found to have a great capacity to recompensate from emotionally taxing problems, they evidenced a lack of control over symptoms resulting from stress and tended to worry more than the norm population. However, Dillon (1983) notes that this finding regarding stress could be due to a discrepancy between the content of the items on the Cn (Control) scale and the religious convictions of the missionary. Lastly, the missionary was found to struggle more against problems encountered in the field. In terms of the gender comparison, the male missionary was found to somewhat resist facing reality (Pa, Si, and Ma scales). The female missionary, on the other hand, tended to deal with reality more directly and be more tenacious in handling difficult situations.

The differences between the means of persevering and nonpersevering missionaries were significant ($p < .05$) on scales L (Lie), F (Confusion), Pt (Psychasthenia), and Cn (Control). Dillon (1983) interprets these statistical results to mean that those missionaries who persevered on the field tended to lie less (L scale) and worry (Pt scale) more than the nonperseverers. In addition, the perseverers experienced more confusion (F scale) than those unable to persevere. However, even though the perseverers experienced more

anxiety and confusion, they maintained more control (Cn scale) over their symptoms. Dillon (1983) notes that an additional finding concerning the nonpersevering missionary is that they "...demonstrated progressively higher levels of depression and schizophrenia over the three time spans" (pp. 216-217).

Although Dillon (1983) found significant statistical differences between the missionary group means and the norm means, the male and female missionaries, and the perseverers and non perseverers, his interpretations of these MMPI scale differences are not presented in a manner in which one can clearly understand the data on which he is basing his interpretations. Dillon's (1983) interpretations would have been more clearly understandable and valid if he had made note of the MMPI scales on which he was making his interpretations. In addition, Dillon's (1983) interpretations of the MMPI scale differences tend to be rather concrete and simplistic. Even though the missionaries had high K scores which can be interpreted as projecting the best possible appearance, high K scores can also indicate that the test taker has some good strengths and psychological resources. In terms of the nonpersevering missionaries having higher scores on the L scale, this does not always simply mean that the subject lies more. In fact, religious people often score higher on the L scale because of their moral and religious convictions and not always because they lie. In addition, Dillon (1983) interpreted the higher scores of the nonpersevering missionaries on scales D (Depression) and Sc (Schizophrenia) to mean that these individuals demonstrated progressively higher levels of depression and schizophrenia. These significant differences between persevering and nonpersevering missionaries probably have meaning, however, it is incredibly concrete to interpret these scale differences as indicating depression and schizophrenia. For example, scoring above the norms on scale Sc (Schizophrenia) can mean that the individual is socially isolated, demonstrates loose associations or tangential thought patterns, and/or is somewhat idiosyncratic in his/her perceptions of the world. These qualities do not necessarily

mean that the individual is schizophrenic (Graham, 1987). Thus, Dillon (1983) found statistically significant results, but his interpretations of those results must be regarded with caution.

The issue of women in missions has been a scarcely researched topic even though women have been involved in the missionary effort for some time. Thus, Beck (1986) addressed the issue of the general functioning of women in missions by identifying trends in the background and training of women currently being sent overseas as compared with those who went overseas thirty years ago. Data was collected from the personnel records of the Conservative Baptist Foreign Mission Society comparing 1951-1953 appointees ($\underline{N}$ = 78) with 1981-83 appointees ($\underline{N}$ = 54) on 37 factors including their levels of education, age, family background, and spiritual experience. The personnel records on 14 of the women in the 1951-53 group were incomplete which affects the internal validity of the study. However, the author felt that the overall group results were probably representative of the whole and could form a basis of comparison with the later group.

The results indicate that in terms of the age of appointment, the mean age for 1951-53 group was 26.81 years and the mean age for the 1981-83 group was 30.71 which was significantly different ($p < .05$). In terms of marital status and years married, the two groups differed significantly in their marital status ($p < .01$) with the 1981-83 group consisting of a larger number of married women who had been married for a longer time. Thus, in terms of the numbers of single women appointed, the 1951-53 group ($\underline{n}$ = 25) clearly exceeds the later group ($\underline{n}$ = 9). In terms of occupation of self and number of dependents, the two groups were not found to be significantly different with both groups having similar percentages of housewives and professionals. In terms of family background, both groups had more single women who had experienced parental loss than did the married and engaged women. In addition, both groups reported exactly the same

percentage of divorce among their parents (9%). In terms of the occupation of father, a significant ($p < .01$) shift occurred from the fathers being employed in blue or white collar jobs in the 1951-53 group to the 1981-83 group being employed in management or the professions. A similar trend was noted in the occupation of mothers in that in the 1981-83 group of mothers, far fewer were housewives and more were professionals ($p < .05$).

In terms of education, the single women in both groups had more education than their married and engaged counterparts. In terms of the number of degrees each group obtained, few (if any) differences emerged. In terms of plans for further education, 28% of the 1981-83 group had plans for further education versus 10% in the 1951-53 group. In terms of cross cultural experience prior to application, a significant difference ($p < .01$) between the two groups was found with 35 women in the 1981-83 group having had the advantage of seeing and experiencing another culture with only 11 women in this group having had no such exposure. In contrast, in the 1951-53 group only four women had had cross cultural experiences with 52 women having had none.

In terms of psychotherapy, only 2% of the 1951-53 group stated they had a "nervous disorder" (which was asked in the 1950s application and treated as roughly equivalent to the 1980s application question regarding past experience with psychotherapy) where 15% of the later group reported some experience with psychotherapy. In terms of amount of debt, the 1981-83 group had about a 1.6 times greater debt load than did their colleagues who applied in 1951-53. In terms of missions experience, only 3% of the women from the 1951-53 groups had served overseas previously as opposed to 11% of the women in the later group. In addition, none of the women from the 1950s group had been children of missionaries whereas 7% of their 1980s colleagues were offspring of missionary parents. In terms of spiritual experience, the number of women who reported conversions during childhood was proportionally the same for both groups, however, there was a

change in the number of conversions reported in adult years for the 1981-83 group (15% vs. 6%).

Beck's (1986) extensive analysis demonstrates that although there are similarities between the two groups, there a number of statistically significant differences between women missionary applicants in the 1980s as compared with those in the 1950s. Some of the differences may be primarily related to the economic differences between the early fifties and the early eighties. Higher education costs and the necessity for both parents to work may explain why the women in the 1981-83 group were more in debt and older yet not significantly more educated. The more promising findings concerning the later groups' greater exposure to psychotherapy and cross cultural differences prior to being sent abroad could potentially lessen the harshness of first term adjustments and culture shock.

Discussion

The literature concerning the general psychological functioning of the missionary is limited to the four studies reviewed. King (1975) and Dillon (1983) generally used sound research designs which included large samples and appropriate statistical tests. However, in addition to missionaries, King's (1975) sample also included other professional groups which limits the generalizeability of her results to a purely missionary population. In addition, Dillon (1983) appeared to use rather simplistic and concrete interpretations of the statistically significant results he found in regard to missionaries' MMPI scores. Beck (1986) conducted a descriptive study where he used statistical tests to find significant differences between the samples studied. Paluszny and Zrull (1971) conducted a descriptive study of missionary functioning but failed to document the sources of their descriptions concerning the candidates or the criteria for pathology which compromises the ability for one to interpret the general validity of their results.

However, several issues can be addressed from a review of the literature. First, it appears that missionaries were found to display no greater pathology than the general population. However, it was found that missionaries differed significantly from the norm population on each scale of the MMPI (Dillon, 1983). This finding did not necessarily reflect greater pathology, but the difference could speak to the uniqueness of personality functioning required of the missionary. Dillon (1983) found that persevering missionaries experienced more anxiety and confusion (as measured by the Pt scale and F scale on the MMPI) than nonpersevering missionaries. This would seem like an antithetical finding unless one recalls that missionaries who demonstrate more flexibility/adaptability are predicted to be more successful and, thus, they may have more tolerance for uncomfortable feelings such as anxiety and confusion.

In addition, Dillon (1983) found that nonpersevering missionaries had higher depression scores as measured by scale D on the MMPI. This finding supports Britt's (1983) finding that a candidate that demonstrates a history of moodiness/depression is at risk for being less successful on the mission field. However, King's (1975) results indicated that a depressive syndrome does not necessarily eliminate the ability of some competent individuals to function in various roles overseas. Because King's subjects both worked in missions and other capacities, her findings are the weakest in terms of generalizing to a missionary population. However, further research on the relationship between depression and missionary nonperseverance would shed light on the question of the degree to which depression disrupts the missionary's ability to serve overseas.

Third, Dillon (1983) found significant differences in personality functioning between men and women as measured by the MMPI. In regards to the issue of women in missions, Beck (1986) found that women candidates in the 1980s demonstrated significant differences when compared to women candidates in the 1950s. Women in the 1980s were found to be older and more in debt than their foremothers. They were more

likely to be married and have had some exposure to psychotherapy. In addition, they were found to have had more cross-cultural experience than the candidates in the 1950s. These results remain to be cross-validated with further research with women from other denominations. These preliminary findings on issues of gender differences and women in missions provides further impetus to more thoroughly research the psychological functioning of women on the mission field.

Summary and Conclusion

The body of literature addressing the issues of missionary selection, stress, and functioning is limited to the 15 studies reviewed in this paper. Some of the studies were completed in the 1970s, but the majority of studies were completed in the 1980s which points to the relatively new interest of psychological application to missions and can partially explain the paucity of empirical literature on the subject. Although empirical designs and methodology were used, many of the studies are preliminary in nature and/or lack replication from further study.

Although the studies reviewed in this paper are limited, the results can provide missionaries, mission administrators, selection committees, and mission psychologists with important practical information regarding selection, stress, and functioning. First, in terms of missionary selection, it appears that a more successful candidate would demonstrate good interpersonal skills and an ability to relate with a diversity of people. In addition, the successful candidate would have a flexibility of character that enables him/her to adapt to the pattern of a foreign culture. The successful candidate is more likely to display an overall emotional stability and the capacity to maintain a peace of mind during problem solving. In this regard, the successful candidate is able to think independently and demonstrates leadership abilities that promote group cohesion and a

task-focus. In general, the more successful candidates will have had a history of persevering through difficulty which is a powerful predictor of success.

Further research in the area of missionary selection remains to be done concerning more specific criteria for a candidate's success based on his/her job assignment. In addition, it remains unclear as to whether the setting (rural versus industrial, for example) in which the missionary works has any effect on his/her success. Furthermore, continued research on the goodness of fit between a candidate's personality traits and the demands of the foreign culture is needed.

Second, in terms of missionary stress, the research shows that missionaries do in fact suffer from stress reactions. However, missionaries have often indicated feeling a pressure to present a good picture of themselves in their work. That presents a bind for them as they may not always feel the freedom to disclose the full extent of their negative feelings. In regard to disclosing negative feelings, missionaries have been found to experience a great deal of stress about confronting others. Often missionaries feel the expression of anger is inappropriate and may prefer to express their anger indirectly. Other interpersonal stressors for missionaries are communicating across language-culture barriers, a lack of privacy, isolation, and family responsibilities. In addition to these interpersonal stressors, missionaries have been found to suffer from work-related stress. Frustration with leadership, the time and effort required to maintain relationships with donors, frequent career transitions, too much work, a lack of job role clarity, and having too many decisions that affect the lives of others are some of the job factors that produce stress for missionaries. In addition, it has been found that women and translation personnel have been found to report higher degrees of stress than other missionary populations.

The studies completed on missionary stress have been varied in the level of sophistication. Some of these findings have been based on designs with small sample

sizes or inadequate statistical analysis. However, Gish (1983), in particular, demonstrated a high degree of sophistication through her use of a carefully designed assessment instrument and consideration of mediating variables that influence the degree of missionary stress. This standard of research is necessary in order to further understand the complex and often idiosyncratic nature of missionary stress. In this regard, further research is needed to understand the high degree of stress found in women on the mission field in addition to translation personnel.

Third, in terms of missionary functioning, it appears that missionaries display no greater pathology than the general population. Individuals who experienced depressive symptoms, but who did not have a chronic history of psychopathology, were found to be able to serve competently overseas over a four year period. However, nonpersevering missionaries studied over a thirty year time span, were found to have higher scores on the Depression scale as measured by the MMPI. Thus, it is unclear at this point as to the degree to which a depressive syndrome or depressive symptoms disrupts the missionary's ability to persevere overseas. In addition, men and women missionaries were found to have significant differences in their personality functioning as measured by the MMPI and women missionary candidates in the 1980s were found to be significantly different on several variables than women candidates in the 1950s. For example, women candidates in the 1980s were found to be older, more in debt, more likely to be married, more likely to have had exposure to psychotherapy, and more likely to have had more cross-cultural experiences prior to application.

These gender differences require further research in order to more fully understand the nature of ongoing functioning in both men and women missionaries. One study was found in the literature that pertained to women in missions and, thus, further research on this issue is needed as women have had a progressively more integral role in the twentieth century missionary outreach. In addition, the studies pertaining to the degree of

depression found in the missionary population are inconclusive and require further research of the degree to which depression disrupts the missionary's ability to persevere overseas.

The research pertaining to missionaries has been characterized as reflecting a "potpourri" of issues stemming from a lack of concerted coordination within the research community (Hunter & Mayers, 1987). Thus, future collaboration between researchers is needed so that a more structured purpose and direction of efforts can be established. In this regard, follow-up studies of the articles reviewed in this paper are needed as these studies are often descriptive or preliminary in nature and require cross-validation. Some of the weaknesses in the literature have been due to small samples and nonrandom sampling which limit the generalizeability of the results. Thus, active collaboration between mission agencies and researchers is also needed so that multiple agencies and denominations can be randomly sampled and represented. This coordination of effort would increase the diversity of samples and facilitate results that can be generalized to the missionary population with more certainty.

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